

## ABSTRACT OF THE DISCLOSURE

5 A wraparound delay amount detecting part calculates a cross-correlation  $r(k)$  from an output speech signal " $a_i$ " supplied to a loudspeaker and an input speech signal " $b_i$ " inputted through a microphone array to obtain a delay amount " $d$ " of a wraparound speech signal. The delay processing part generates a speech signal " $a_{i-d}$ " obtained by delaying the output speech signal " $a_i$ " by the delay amount " $d$ ". Even if there is a change in delay amount due to the variation in environment, appropriate delay processing can be conducted by the delay processing part. In an adaptive filter, an estimated

10 wraparound speech signal  $a_{i-d}'$  is generated from the speech signal " $a_{i-d}$ " subjected to delay processing. A subtracter subtracts the estimated wraparound speech signal  $a_{i-d}'$  from the input speech signal " $b_i$ " to generate an echo cancellation signal " $e_i$ ". A coefficient updating part updates the coefficient of the adaptive filter.

201220" F44B/00T